

What is claimed is:

1. A liquid crystal display (LCD) module, comprising

at least one square-frame-shaped bump, located on a first substrate;

5 at least one H-shaped bump, located on a second substrate, wherein, when said first substrate and said second substrate are assembled, said square-frame-shaped bump is opposite to said H-shaped bump, and a portion of said H-shaped bump contacts a portion of said square-frame-shaped bump, so as to form at least one overlapped area; and

10 a liquid crystal layer, wherein said liquid crystal layer is located between said first substrate and said second substrate, and said liquid crystal layer is filled in the area between said square-frame-shaped bump and said H-shaped bump;

a thin film transistor (TFT), wherein said TFT is located on one of said first substrate and said second substrate; and

15 a color filter (CF), wherein said color filter is located on one of said first substrate and said second substrate.

2. The LCD module of claim 1, wherein said first substrate has a polarizer, and said polarizer and said square-frame-shaped bump are located on different sides of said first substrate.

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3. The LCD module of claim 2, wherein said first substrate has at least one compensation film, and said compensation film is located between said first substrate and said polarizer.

25 4. The LCD module of claim 1, wherein said second substrate has a polarizer, and said

polarizer and said H-shaped bump are located on different sides of said second substrate.

5        5. The LCD module of claim 4, wherein said second substrate has at least one compensation film, and said compensation film is located between said second substrate and said polarizer.

6. The LCD module of claim 1, wherein said square-frame-shaped bump and said H-shaped bump are made of photoresist material.

10        7. The LCD module of claim 1, wherein the cross-sectional shape of said square-frame-shaped bump is selected from a group consisting of a dome-type protrusion shape, a cubic-type protrusion shape and a prism-type protrusion shape.

15        8. The LCD module of claim 1, wherein the cross-sectional shape of said H-shaped bump is selected from a group consisting of a dome-type protrusion shape, a cubic-type protrusion shape and a prism-type protrusion shape.

20        9. The LCD module of claim 1, wherein the dielectric constant of said square-frame-shaped bump and the dielectric constant of said H-shaped bump are smaller than the dielectric constant of said liquid crystal layer.

25        10. A LCD manufacturing method, comprising:  
         providing a first substrate and a second substrate;  
         forming at least one square-frame-shaped bump on said first substrate;  
         forming at least one H-shaped bump on said second substrate;

forcing said square-frame-shaped bump and said H-shaped bump to face to each other, and to be mutually aligned and combined together by pressing, wherein a portion of said H-shaped bump contacts a portion of said square-frame-shaped bump, so as to form at least one overlapped area; and

5        filling a liquid crystal layer in the area between said first substrate and said second substrate.

11. The LCD manufacturing method of claim 10, wherein the process for fabricating said square-frame-shaped bump is selected from a group consisting of a  
10        photolithographic process and a backside exposure process.

12. The LCD manufacturing method of claim 10, wherein the process for fabricating said H-shaped bump is selected from a group consisting of a photolithographic process and a backside exposure process.

15        13. The LCD manufacturing method of claim 10, further comprising first forming at least one pixel electrode on said first substrate, and then forming said square-frame-shaped bump, wherein said square-frame-shaped bump encloses said pixel electrode.

20        14. The LCD manufacturing method of claim 10, further comprising first forming at least one common electrode on said second substrate, and then forming said square-frame-shaped bump on said common electrode layer, wherein said square-frame-shaped bump encloses said pixel electrode.

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15. The LCD manufacturing method of claim 10, further comprising attaching a compensation film to said first substrate.

16. A liquid crystal display (LCD), comprising

5 a first substrate, wherein said first substrate has at least one pixel electrode and a TFT;

a second substrate parallel to said first substrate, wherein said second substrate has at least one common electrode layer and a color filter;

10 at least one square-frame-shaped bump, located on said first substrate, wherein said square-frame-shaped bump encloses said pixel electrode;

15 at least one H-shaped bump, located on said second substrate, wherein, when said first substrate and said second substrate are assembled, said square-frame-shaped bump is opposite to said H-shaped bump, and a portion of said H-shaped bump contacts a portion of said square-frame-shaped bump, so as to form at least one overlapped area; and

a liquid crystal layer, wherein said liquid crystal layer is located between said first substrate and said second substrate, and said liquid crystal layer is filled in the area between said square-frame-shaped bump and said H-shaped bump.

20 17. The LCD of claim 16, wherein said first substrate has a polarizer and at least one compensation film, and said polarizer and said compensation film are located on one side of said first substrate different from where said square-frame-shaped bump is located, and said compensation film is located between said first substrate and said polarizer.

25 18. The LCD of claim 16, wherein said second substrate has a polarizer and at least one

compensation film, and said polarizer and said compensation film are located on one side of said second substrate different from where said H-shaped bump is located, and said compensation film is located between said second substrate and said polarizer.